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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,671

08/16/2006

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EXAMINER

RILEY, SHAWN

ART UNIT

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2838

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,671	Applicant(s) SCHALLMOSER ET AL.	
	Examiner Shawn Riley	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>jan& aug 2008</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The abstract should not refer to purported merits (**improved drive circuit**) or speculative applications of the invention and should not compare the invention with the prior art. Correction is required.

1. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "What is disclosed", "**The invention relates to**", "This invention generally relates to", "There is provided", "Methods and apparatus are provided", "The present invention provides", "The present disclosure is concerned with", "According to the invention", "The objective of the invention", "An apparatus is disclosed for providing", or like phrases, etc. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-19 are rejected under 35 U.S.C. §102(b) as being fully anticipated by Bally (EP 0936845 A1) and Takehara et al. (EP 0735658 A2). Bally shows,¹ (in, e.g., the(ir) figures 1 and 4 and corresponding disclosure) and Takehara et al shows,² (in, e.g., the(ir) figures 1 and 8 and corresponding disclosure).

I. A converter circuit having a switching transistor (MOSI) and a drive circuit for driving the switching transistor (MOSI) which is designed to switch the switching transistor (MOSI) in response to a voltage or current value, characterized in that

1 Note claims will be addressed individually and the material in parentheses are the examiner's annotated comments. Further unless needed for clarity reasons, recited limitation(s), will be annotated only upon their first occurrence. Claims that are not annotated are seen as having already had the invention(s) addressed previously in an annotated claim and may be repeated for convenience of the applicant/examiner. Bolded words/phrases indicate rejected material based 112 paragraph rejections. Underlined words/phrases indicate objected to material. For method claims, note that under MPEP 2112.02, the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Therefore the previous rejections based on the apparatus will not be repeated.

2 Note claims will be addressed individually and the material in parentheses are the examiner's annotated comments. Further unless needed for clarity reasons, recited limitation(s), will be annotated only upon their first occurrence. Claims that are not annotated are seen as having already had the invention(s) addressed previously in an annotated claim and may be repeated for convenience of the applicant/examiner. Bolded words/phrases indicate rejected material based 112 paragraph rejections. Underlined words/phrases indicate objected to material. For method claims, note that under MPEP 2112.02, the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Therefore the previous rejections based on the apparatus will not be repeated.

the drive circuit has two series-connected threshold value components (KI, K2, KI', K2') which respond to a respective input signal as a function of the threshold value with an output signal transition, in that an input of a first one of the threshold value components (KI, KI') is connected up such that it can detect the voltage or current value, and the output of the first threshold value component (KI, KI') drives an input of the second threshold value component (K2, K2'), and the output of the second threshold value component (K2, K2') drives the control electrode of the switching transistor (MOSI).

2. The converter circuit as claimed in claim 1, in which the drive circuit is designed to respond to a voltage or current value in the converter circuit.

3. The converter circuit as claimed in claim 2, in which the drive circuit is designed to respond to a voltage or current value of the switching transistor (MOSI).

4. The converter circuit as claimed in claim 3, which contains a class E converter.

5. The converter circuit as claimed in claim 3, also in conjunction with claim 4, which is designed as a single-feedback system via the threshold value components (KI, KI').

6. The converter circuit as claimed in claim 1, in which at least one of the threshold value components (KI, K2, KI', K2') is a differential amplifier, preferably both of the threshold value components (KI, K2, KI', K2') are differential amplifiers.

7. The converter circuit as claimed in claim 6, in which the differential amplifier(s) (KI, K2, KI', K2') is/are (a) comparator(s).

8. The converter circuit as claimed in claim 1 having a delay circuit (R2, C2, D2) between the output of the first (KI, KI') and the input of the second (K2, K2') threshold value component, which delay circuit (R2, C2, D2) passes on output signals, representing a first switching state of the switching transistor (MOSI), from the first threshold value component (KI, KI') to the input of the second threshold value component (K2, K2') only once a fixed time has elapsed, but allows output signals representing the other, second switching state to pass with less of a time delay.

9. The converter circuit as claimed in claim 8, in which the delay circuit (R2, C2, D2) has a capacitor (C2), and the output of the first threshold value component (KI, KI') is connected to the capacitor at a high impedance (D2, KI') when there is a transition from an output signal representing the second switching state to an output signal representing the first switching state and is connected to the capacitor at a lower impedance (D2, KI') when there is a transition from an output signal representing the first switching state to an output signal representing the second switching state.
10. The converter circuit as claimed in claim 9, in which the first threshold value component (KI) has a push-pull output, and the high impedance is generated by a rectifier diode (D2) which is off between the output of the first threshold value component (KI) and the capacitor (C2).
11. The converter circuit as claimed in claim 9, in which the first threshold value component (KI') has an open-collector or open-drain output.
12. The converter circuit as claimed in claim 9 in which the second threshold value component (K2, K2') is a comparator, and a reference value of the comparator (K2, K2') can be adjusted in order to be able to adjust the fixed time for passing on the output signal representing the first switching state of the switching transistor (MOSI).
13. The converter circuit as claimed in claim I, in which a driver circuit (TR) is provided between the output of the second threshold value component (K2, K2') and the control electrode of the switching transistor (MOSI).
14. An electronic ballast for a light-emitting device (R_Load), in particular a lamp, having the converter circuit as claimed in claim I.
15. The electronic ballast as claimed in claim 14, which is designed to supply power to a dielectric barrier discharge lamp (R_Load).
16. An illumination system comprising a lamp (R_Load) and the electronic ballast as claimed in claim 14.
17. A method for operating the converter circuit as claimed in claim I, in which the current or voltage value is supplied to the drive circuit and is applied there to the input of the first threshold value component (KI, KI'), an output signal, which responds to said current or voltage value as a function of the

threshold value, from the first threshold value component (KI, KI') is applied to the input of the second threshold value component (K2, K2'), and an output signal, which responds to said output signal from the first threshold value component (KI, KI') as a function of the threshold value, from the second threshold value component (K2, K2') leads to the control electrode driving the switching transistor (MOSI).

18. A method for operating a light- emitting device (R Load) using the electronic ballast as claimed in claim 14.

19. An illumination system comprising a lamp (R Load) and the electronic ballast as claimed in claim 15.

Allowable Subject Matter

3. No claims are allowable over the prior art of record.

Conclusion

N.B. Any inquiry from other than the applicant/attorney of record (~~THAT INCLUDES SECRETARIAL AND ANY OTHER TYPE OF SUPPORT STAFF~~) concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197.

Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Akm Ullah can be reached on 571-272-2361. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent

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to fax number **571-273-8300**. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 2008

/Shawn Riley/
Primary Examiner AU 2838